MCI Telecommunications Corporation

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ORIGINAL

November 17, 1998

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
Room 222
1919 M Street, N.W.
Washington, DC 20554

EX PARTE

Re: CC Docket No. 96-128; Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996

Dear Ms. Salas:

MCI WorldCom, Inc. (MCI WorldCom) hereby submits the attached economic analysis of the payphone market prepared by George S. Ford, Senior Economist for MCI WorldCom. The attached analysis was prepared as a follow-up to the economic debate held at the Commission on September 24, 1998, between MCI WorldCom and the RBOC/GTE/SNET Payphone Coalition.

As demonstrated by the attached analysis, competition in the payphone market is not effective price competition due to a number of factors including a low absolute price for local coin calls, spatial differentiation, high fixed-sunk costs, locational entry barriers and a lack of information. As a result, the price and the cost of a local coin call do not and will not converge. Since the price of a local coin call does not equal cost, it is not an appropriate cost-surrogate for coinless calls. Thus, the Commission cannot base payphone compensation for coinless calls on local coin call prices.

We are available to discuss any questions you may have in connection with the attached analysis.

Sincerely,

Mary J. Sisak

Mary J. Sisak

Attachment

cc: Lawrence Strickling
Dorothy Attwood
Craig Stroup
Don Stockdale
Glenn Reynolds
Bill Rogerson
Paul Gallant
Thomas Power
James Casserly
Kyle Dixon
Kevin Martin

Further Thoughts on Payphone Compensation

In Section 276 of the Communications Act, the FCC was directed to: (1) eliminate the prior payphone regime in which payphone services were subsidized by "exchange access" charges paid to them by interexchange carriers such as MCI; and (2) replace that system with a "per call compensation plan" that "fairly compensated" all payphone service providers for each "completed intrastate and interstate call." 47 U.S.C. § 276 (b)(1)(A) & (B). It is the amount of compensation that PSPs should fairly realize for the subscriber 800 and access code calls that the Commission is considering in the context of the Third Report and Order.

I. The Commission's Compensation Orders

The Commission has issued two orders that purport to implement Section 276 of the Act by establishing per-call compensation rates for coinless (i.e. dial-around and 800) calls. In the First Order, the Commission set the compensation rate at $0.35, the prevailing drop rate for local coin calls in four of the five states that did not regulate the local coin rate. Report and Order, Docket No. 96-128, FCC 96-388 (September 20, 1996). The Court of Appeals for the District of Columbia reversed the Commission on appeal, finding that the Commission's Order "epitomized arbitrary and capricious decisionmaking." Illinois Public Telecom. Ass'n v. FCC, 117 F.3d 555, 563-64 (D.C. Cir. 1997). On remand, the Commission re-adopted the same basic scheme it had employed in the First Order, and set a compensation rate of $0.284. Second Report and Order, CC Docket No. 96-128, FCC 97-371 (October 9, 1997). On appeal, the Court rejected the Commission's rationale, reversing and remanding to the Commission yet again. MCI Telecom. Corp. v. FCC, 143 F.3d 606 (D.C. Cir. 1998). Following the Remand, the Commission issued a Notice requesting additional comments on the appropriate determination of payphone compensation for coinless calls. 13 F.C.C.R. 12093.[1] In particular, the Commission sought comment on "competition in the payphone market since the deregulation of payphones and the impact of deregulation on the local coin rate (p. 3)."

1. THE FIRST ORDER

In the First Order, the Commission attempted to set a compensation rate for coinless calls that would satisfy the Act's requirement that "all payphone service

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[1] *Pleading Cycle Established for Comment on Remand Issues in the Payphone Proceeding*, Public Notice DA 98-1198, CC Docket No. 96-128, Released: June 19, 1998.

providers are fairly compensated for each and every completed intrastate and interstate call . . ." Section 276(b)(1)(A). "Fair compensation," the Commission found, is an amount that compensates PSPs "for their costs in originating the types of calls for which compensation is deemed appropriate . . . ." First Order at ¶24. [2] This interpretation of fair compensation - that the compensation rate should equal cost - provided meaningful, practical guidance in setting a compensation rate. The next step, obviously, was to determine the cost of originating a coinless dial-around/800 call. Once the cost was determined, the compensation rate, by definition, would be established.

Two approaches for determining costs were considered by the Commission. First, the Commission could adopt a cost-estimate approach where the cost of a call is estimated using a cost study. Alternatively, a cost-surrogate approach could be employed where a proxy or surrogate for the cost of a coinless call could be used, assuming an accurate surrogate for the cost of coinless call could be found. If the cost (or price) of some other good or service was known to *equal the cost* of coinless call, then setting the compensation rate equal to that amount would be the functional equivalent of setting the rate equal to cost.

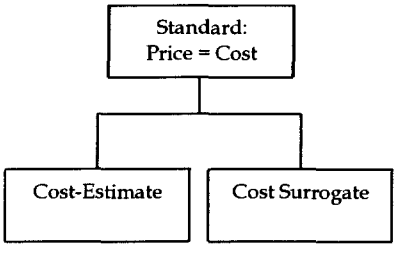

Figure 1. Alternatives for Cost Determination

Parties to the proceeding provided the Commission with both cost estimates and suggested cost surrogates. In the *First Order*, the Commission chose to adopt the cost surrogate approach, concluding that the cost data on the record was not sufficiently reliable for the cost-estimate approach. First Order at ¶ 24.

The Commission's articulated rationale was as follows:

Step 1: The compensation rate should equal cost.

> "PSPs should be compensated for their costs in originating the types of calls for which compensation is deemed appropriate." First Order at ¶ 24.

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[2] Although at certain points in its Order the Commission seemed to suggest that fair compensation is simply a situation "where there is a willing seller and a willing buyer at a price agreeable to both," First Order at ¶ 52, that standard has little practical meaning and offers no guidance on setting a rate. *Any* price that is associated with a positive level of output would qualify as "fair" under this interpretation -- the monopoly price notwithstanding. There are numerous willing buyers and sellers at the monopoly price, but an inflated monopoly price certainly would not be considered "fair" under any reasonable interpretation of the word.

Step 2: Cost should be measured by a cost surrogate.

> In "the absence of reliable data," First Order at ¶ 340, the "PSPs should be compensated for their costs [and] these costs should be measured by appropriate cost-based surrogates." First Order ¶ 24.

Step 3: The cost of a coinless call equals the cost of a local coin call.

> "...the cost of originating the various types of payphone calls are similar." First Order at ¶¶ 15, 70.[3]

Step 4: Because the cost of a coin call is unknown, the price of a coin call will serve as the surrogate for the cost of coinless call.

> "If a rate is compensatory for local coin calls, then it is an appropriate compensation amount for other calls as well because the cost of originating the various types of payphone calls are similar (388, ¶ 70 and 439, ¶ 15)."

For the Commission's chosen surrogacy approach to correctly determine the compensation rate for a coinless call, Steps 3 and 4 must be accurate assertions – that is, the cost of a coin and coinless call must be equal and the price of a coin call must equal its cost. The Commission presented no evidence in support of Step 3 of its analysis, i.e., the cost of coin and coinless calls are similar. Indeed, to the contrary, there was substantial record evidence that the cost of these calls was different. By far the boldest assumption in the Commission's reasoning, however, was Step 4. In order for the price of a local coin call to stand in for the stand-in (i.e., the local coin cost), the price of a coin call must equal its cost. No empirical evidence was presented by the Commission or any other party supporting this assumption.[4]

This cost surrogate approach to cost-based compensation produced a dial-around compensation rate of $0.35, the prevailing drop rate for a local coin call in

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[3] The Court noted in its Remand of the First Order that "[t]he FCC decided that the compensation rate for 800 and access code calls should be equal to the deregulated local coin rate. The FCC rested this conclusion on one ground -- that the costs of coin calls, 800 calls, and access code calls all are similar: If a rate is compensatory for local coin calls, then it is an appropriate compensation amount for other calls as well, because the cost[s] of originating the various types of payphone calls are similar." First Remand at 563.

[4] Some rather loose discussions of the properties of the perfectly competitive equilibrium were discussed by numerous payphone industry consultants. No party, however, asserted that the payphone industry could be characterized as perfectly competitive in the textbook sense.

four of five states where local coin rates were not regulated.[5] This decision was appealed by, among others, MCI, AT&T, and the Public Utility Commissions of numerous states to the Court of Appeals for the D.C. Circuit.

2. COURT REMAND OF THE FIRST ORDER

On appeal, the D.C. Circuit reversed. The Court held that the Commission's surrogate approach "epitomized arbitrary and capricious decisionmaking" because the record simply did not support the Commission's assertion that the cost of a coinless call equals the cost of a coin call (what we have described as Step 3). Indeed, the Court held that there was substantial evidence in the record that the cost of coin and coinless calls is in fact different, and that the FCC had thus not justified the use of the price of coin calls as a surrogate for the cost of coinless calls:

> The problem with the FCC's decision is that the record in this case is replete with evidence that the costs of local coin calls versus 800 and access code calls are not similar.... The FCC's ipse dixit conclusion, coupled with its failure to respond to contrary arguments resting on solid data, epitomizes arbitrary and capricious decisionmaking. IPTA, 117 F.3d. at 563-64.

3. THE SECOND ORDER

In the Second Order, the Commission appeared to assume that the D.C. Circuit had accepted its general surrogacy approach, but had found fault only with the assumption that the costs of coin and coinless calls are identical. Thus, the Commission attempted to "fix" the First Order by simply calculating the differences in cost between coin and coinless calls. Thus, the modified reasoning of the *Second Order* is essentially as follows:

Step 1: The compensation rate should equal cost.

Step 2: Cost should be measured by a cost surrogate.

Step 3: The cost of a coinless call is less than the cost of a local coin call.

> "We ... adjust the market-based local coin rate for differences in the costs of coin and coinless operation, reducing the market-based local coin rate for coin-related costs and increasing the market-based local coin rate to reflect costs that are related to access code and subscriber 800 calls. ... (371, ¶ 26)."

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[5] "In four of those states, Iowa, Nebraska, North Dakota, and Wyoming, the local coin drop-rate averages $.35 per call. In the other deregulated state, South Dakota, the average drop-rate is $.25 per call (388, ¶56)." The Commission has provided no explanation as to why the rates differ.

Step 4: Because the cost of a coin call is unknown, the price of a coin call will serve as the surrogate for the cost of a coin call which is adjusted downward by the cost difference between coin and coinless calls.

> "We conclude that the deregulated local coin rate, adjusted for cost considerations, is a reasonable market-based surrogate for determining the default per-call compensation rate and specifically responds to the court's concern ... (371, ¶ 26)."

The Commission thus set the per-call compensation rate for coinless calls at $0.284 – the $0.35 local coin rate less $0.066 that includes reductions for coin specific costs and additions for coinless-specific costs. Second Order ¶ 41. In the Second Order, the Commission provided some evidence on the relationship between the cost of a coin and coinless call. The Commission did not, however, offer any evidence on Step 4 of its analysis – the price of a coin call equals its cost.

4. COURT REMAND OF THE SECOND ORDER

On appeal, the D.C. Circuit again reversed. Although the Commission argued that subtracting differences in costs between coin and coinless calls was sufficient to overcome the Court's concerns, the D.C. Circuit made quite clear that this was not the case:

> ... we did not reach the question of the reasonableness of deriving a market-based rate for coinless calls from the coin call rate, because we found that there was unexplained record evidence contradicting the Commission's claim that the costs of coinless and coin calls were similar. MCI Telecom. Corp., 143 F.3d at 609.

The Court was clear in the *First Remand* that it had limited its attention to the 'Step 3' cost issue, not because the cost surrogate approach adopted by the Commission was reasonable as a general matter, but because the Commission had ignored so obviously record evidence on the cost differences between coin and coinless calls that it could be reversed on that ground alone. In reversing the *Second Order*, the Court again found that the FCC had provided no reasoned explanation for its surrogacy scheme. The Court concluded:

> Having examined the record thoroughly, we find the Commission's explanation of its derivation of the $.284 rate plainly inadequate. The Commission never explained why a market based rate for coinless calls could be derived by subtracting costs from a rate charged for coin calls.... The Commission's reasoning may have depended on the premise that the market rate for coin calls generally reflects the costs of those calls. This assumption would hold true in a competitive market in which costs and rate converge Id. at 609.

The fact that the Commission "merely declared itself 'confident that market forces will keep payphone prices at competitive levels' (Second Remand)" did not satisfy the Court:

> Some articulation of this crucial assumption [competition in the payphone industry ensures that the local coin rate equals cost] was required, especially because the Commission itself has suggested that the assumption may not be accurate. The Commission acknowledged in the *First Order* that, because of locational monopolies and incomplete information endemic to the payphone market, the coin call rate may potentially diverge from coin call costs. Id. at 608.

Indeed, in both the *First* and *Second Orders* the Commission recognized that there are characteristics of the payphone industry that substantially weaken price competition and cause the local coin call rate to "diverge from coin call costs."

II. Imperfect Competition in the Payphone Industry

There are numerous factors that lead one to question the strength of competition in the payphone industry, especially regarding the effects of competition on prices. The Commission explicitly recognized three important factors that substantially weaken price competition in the payphone industry: *spatial differentiation* ("there are certain locations where, because of the size of the location or the caller's lack of time to identify potential substitute payphones, no 'off premises' payphone serves as an adequate substitute for an 'on premises' payphone (388, ¶ 14-16)"); *incomplete information* ("for competitive markets to work properly, it is essential that consumers have full information concerning the choices available to them. Information on prices for payphone service is of primary importance (388, ¶ 14-16)".; and *entry barriers* (in some locations payphones cannot "be placed without the permission of the location provider (388, ¶ 73) and "the location provider can contract exclusively with one PSP to establish that PSP as the monopoly provider of payphone service (388, ¶ 15)."

Each of these three factors has the effect of reducing price competition, driving a wedge between price and cost. All three also are pervasive in the payphone industry; they are the rule and not the exception. These three important competitive issues, in addition to the potentially competitively relevant issues of call blocking and substituting local coinless calls for local coin calls, are discussed more fully below.

1. SPATIAL DIFFERENTIATION

In analyzing the degree of competition in the payphone marketplace, it is essential to define the market in which payphones compete. In the simple economic models of competition where equilibrium is characterized by price equal cost, there

is typically a centralized market clearing process, e.g., a world wheat market. In this centralized market, thousands of well informed buyers and sellers interact to produce a market price. No one firm or consumer has a meaningful effect on price and no firm is excluded from participating in the market. Clearly, this type of competition does not characterize the payphone marketplace. As all parties, including the FCC, recognize payphone sites are spatially differentiated (388, ¶ 14-16). Differentiation breaks the direct link between price and cost even in highly competitive situations (i.e., Bertrand competition).

The *Merger Guidelines* approach defines a geographic market as the distance a sufficient number of consumers would travel to another supplier's location so that a five-to-ten percent increase in price at one location would be unprofitable. The question is, therefore, how far would a sufficient number of consumers travel to avoid a nickel increase in the local coin rate (about a 15 to 20 percent increase at current coin rates due to the nickel increment) so that the rate increase is unprofitable?[6] The geographic market of a payphone might therefore be characterized as the "5¢ circle," i.e., the distance a consumer would search to avoid a $0.05 increase in price.

Economics tells us that a rational consumer would only search for a different payphone if the expected price reduction exceeds the search cost. Knowing that consumers (on average) are not aware of either the exact location of other payphones or the prices at those locations,[7] and that transportation costs alone are bound to exceed $0.05, the proposition that alternative payphone sites limit the market power at any one payphone site is highly dubious.

2. INCOMPLETE INFORMATION

A glaring lack of information on behalf of consumers further attenuates competitive forces in the payphone marketplace. As discussed above, a consumer's decision to search for a lower price depends on the expected reduction in price and the cost of search. Without information on the prices of local calls at other "nearby" payphones, a consumer's willingness to actively search for a lower price is greatly diminished. Even if consumers knew that there was a 50 percent chance of finding a lower priced payphone, the expected savings would be only 2.5¢ (0.50 probability

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[6] Note that the issue is not whether a few would search, but enough consumers to make the price increase unprofitable.

[7] In a survey by Consumer Reports, only 30% of payphone sites had alternative sites in visible proximity. Of course, one might expect that many of these nearby sites were operated by the same PSP (Consumer Union, *Pay Phone Competition?*, May 1998: www.igc.org/consunion/other/payphone1.htm).

multiplied by 5¢ price reduction), an amount routinely left in "Have a penny" cups at convenience stores and restaurants.[8]

Recent Commission action requiring PSPs to post price information at each site will not resolve the competitive implications of imperfect information. For competitive forces to drive price to cost, consumer information cannot be restricted to the price charged at any one payphone site, rather prices must be known at *all* payphone sites that might be considered in the same market. Price competition is a consequence of price comparison, not simply price information.[9] The inability of consumers to make meaningful price comparisons across multiple payphone sites further demonstrates that payphone markets are not "competitive" in the sense that it cannot be assumed that the retail price of a coin call at any given payphone equates to the cost of that call.

3. ENTRY BARRIERS

Another characteristic of competitive markets is free entry. Although the Commission and the payphone industry have suggested that the payphone market is characterized by free entry, that is demonstrably wrong. Despite the fact that there is easy entry into the bidding process for the exclusive right to provide payphone service at a given location, there is not free entry into that location's geographic market. For entry to constrain market power, it must occur in the market for which that power is an issue. Given the narrow geographic boundaries of a payphone market (the 5¢ circle), entry typically cannot occur in the relevant market without permission of the premise owner. And since the premise owner is reaping the benefit of the locational monopoly through commission payments, there is no interest in allowing payphone competition on the premise.

Avoiding price competition is especially important given the high fixed costs of locating a payphone. Locating too close to other payphones may lead to ruinous price competition. Thus, a payphone operator would prefer to maximally differentiate (geographically) its own payphone from others in order to limit price competition. In other words, a PSP will attempt to locate a phone so that the phone could reap some of the benefit of a geographic area's inherent traffic but would avoid price competition with existing phones.[10] No firm actively seeks to engage in

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[8] In addition, consumers frequently use two quarters for a local coin call (and do not receive change) choosing to overpay by $0.15 rather than searching for change.

[9] As our sample in Appendix A shows, even price information at payphones is frequently unavailable.

[10] For a theoretical discussion of these principles, see Jean Tirole, *The Theory of Industrial Organization* (1995), Ch. 7.

price competition. Further, sunk costs are not a trivial portion of total cost at individual payphone locations and economic theory clearly concludes that sunk costs are a barrier to entry.[11] In the presence of sunk costs, above normal profits at existing locations may not induce an entry response.

4. THE IRRELEVANCE OF CALL BLOCKING

The notion that an IXC's ability to block payphone calls somehow restrains the market power of payphones is indeed peculiar. The choice to buy or not to buy is common to virtually all markets, yet monopolies exist. Consumers can choose whether or not to purchase cable television service, but few would argue that cable television operators do not possess substantial market power. Furthermore, a reduction of output is the *sine qua non* of monopoly and blocking is simply one way for output to be reduced. The fact that an IXC or 800 subscriber is willing to accept fewer calls at higher dial-around compensation rates implies only that demand is downward sloping, not that market power is somehow curtailed.[12] The effect of blocking on the market power of the payphone operator is very limited whether the blocking capabilities are limited to all payphone calls or are advanced enough to allow a carrier to block by payphone operator, individual payphone, or even per-call. The Commission's claim that blocking is an effective restraint on market power is akin to saying a $500 per-month unbundled loop rate effectively restrains the market power of incumbent local exchange monopolists simply because MCI Worldcom can choose whether or not to acquire the loop.

Furthermore, the belief that blocking is an important constraint on PSP market power presumes that the payphone operator *willingly* offers dial-around (i.e., interconnection) services. Recognizing that payphone operators are *forced* by TOCSIA to provide interconnection to interexchange carriers and would not do so willingly, it is apparent that the choice of an interexchange carrier to refuse to accept dial-around calls is entirely compatible with the desires of the payphone operator to increase its profits by reducing the number of rivals faced by the presubscribed OSP. [13] Blocking simply allows the PSP to avoid the plain intention of the TOCSIA

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[11] According to MCI's cost study, about 25 percent of the capital cost of a payphone are sunk (installation and line set up).

[12] Blocking simply gives some downward slope to the demand curve where without that ability the demand curve would be perfectly inelastic.

[13] PSPs would less inclined to block toll-free calls since these calls do not compete directly with the PSP's long distance services. This fact does not, however, imply that the PSP would not seek to charge the monopoly price for subscriber 800 calls, and by doing so reduce the number of such calls made from the payphone.

rules. It hardly seems reasonable to presume that refusing to purchase a service a PSP *does not* want to sell reduces its market power.[14]

5. Dial-Around as a Substitute for Local Coin Calls

As mentioned earlier, when a consumer is out of change, using a calling card (debit or credit) to make a local coin call is a reasonable alternative to paying the local coin rate. Interexchange carriers typically charge instate toll rates for local calls made from a payphone so that the charges for the call depend on the instate access charge. In the future, as local coin rates continue to rise, the ability to use a calling card (including debit cards) may become a lower price option for local calls. In other words, as coin rates rise and become increasingly based on time increments and as instate access charges continue to fall, calling card calls may serve as an effective substitute for local coin calls.[15] Calling card calls, in essence, may be a realistic competitive threat to spatial payphone monopolists. Absence of a set-up fee for calling card calls – a feature of some carriers' calling plans -- makes this substitution more probable. However, the price constraining effect of the calling card option for local calls disappears if the coinless compensation rate is 6.6¢ less than the local coin rate. The Commission's cost-surrogate approach, where the dial-around compensation rate is only a few cents off the prevailing local coin rate, eliminates the possibility of coinless calls competing with local coin calls whether the local coin rate is $0.35 or $1.75.

III. Monopoly and Locational Rents

While both the payphone industry and the Commission recognize the spatial nature of payphone markets, both fail to consider the consequences of such differentiation on price competition in the payphone industry. One glaring inconsistency resulting from poor market definition is the treatment of locational rents.

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[14] The PSPs lack of incentive to offer dial-around service is evidenced by the fact that MCIW must maintain field personnel to test payphones for TOCSIA compliance. The fact that these costly tests are conducted indicates that enough PSPs illegally block and re-route dial-around calls to make such tests worthwhile.

[15] Given the present levels of instate access charges, using a calling card for local calls is more likely just a matter of convenience than price.

Commission payments to premise owners average about $50 per month, or about 20 percent of the average payphone's revenue.[16] These commission payments vary substantially by location, and in some cases payphone operators are compensated by the premise owner for maintaining unprofitable payphones. Since the average is about $50, it would not be surprising to see commission payments in excess of $100. Although the payphone industry contends that these locational rents represent a legitimate economic (social) cost – a monthly rental payment for the space occupied by the payphone – as demonstrated below, the payphone industry is wrong. The existence of excessive locational rents highlights the lack of price competition of the payphone industry.

1. PRICES AND PROFIT IN THE PAYPHONE INDUSTRY

The presence of a somewhat uniform drop rate for local coin calls and the substantial variation in and the magnitude of locational rents paid by PSPs to premise owners has caused much confusion. Much of this confusion is driven by the forced, and inappropriate, application of the competitive model to the payphone industry. However, evaluating these two characteristics of the payphone industry (somewhat uniform rates and differing locational rents) within the context of monopoly behavior is straightforward.

Consider a simple analysis of monopoly pricing. If a monopolist faces the profit function $[(p - c)q(p) - f]$ (where p is price, c is marginal cost, q is output, and f is fixed cost) it will set price at the profit maximizing level p^*. We can allow the payphone sites to differ only in the quantity of "traffic" at each location by rewriting the profit function as $[(p - c)\lambda q(p) - f]$, where λ is simply a proportional scale of demand.[17] Solving the (first order condition of the) profit function for the profit maximizing price, we find that the monopoly price (p^*) is identical regardless of the value of λ.[18] Thus, a uniform monopoly price across payphone sites that vary only in traffic is not unexpected. The same point is illustrated in Figure 2. Whether or not the monopolist faces the demand curve D_1 or the larger demand D_2, the monopoly price is the same.

In the figure, a payphone site with demand D_1 is not profitable but with demand D_2 is profitable (given average cost AC). The profit generated by payphone service

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[16] According to public documents filed by Peoples Telephone, commissions payments per payphone average about $62 per month, in excess of 20 percent of the average monthly revenue per phone ($280).

[17] If the average traffic location is $\lambda = 1$, then $\lambda < 1$ for below average and $\lambda > 1$ for above average traffic locations.

[18] The λ term cancels out of the first order condition of profit maximization.

with demand D_2 is p^*abg. Economic theory indicates that a PSP would be willing to pay up to this amount (p^*abg) for the exclusive right to operate the payphone at this site. Thus, the entire profit (p^*abg) is transferred to the location owner from the PSP in the form of locational rent. The multitude of PSPs operating in the U.S. today ensures this result since it is competition among PSPs for the exclusive right to serve that allows the seller of that right to extract the entire monopoly profit (whatever its size). No locational rent is generated by demand D_1 because the payphone site generates a loss of p^*def. In fact, there is no price that generates a profit given demand D_1 and average cost AC. However, average costs can be reduced by using lower cost equipment, pedestals, enclosures, or other fixed inputs, perhaps making the provision of payphone service to demand D_1 profitable.[19]

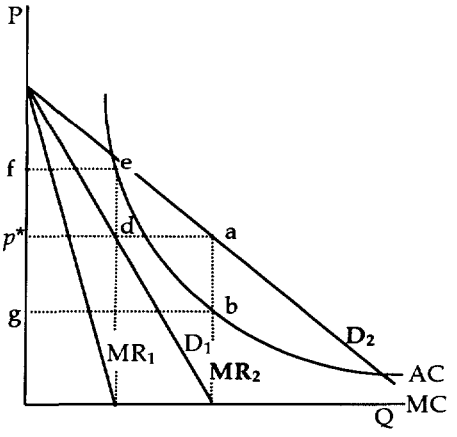

Figure 2.

This simple analysis explains (where the Commission never does) why despite average cost differences across sites, the price of a local coin call in deregulated states does not vary substantially. Profit maximization is based on a markup over marginal cost not average cost and marginal cost is not expected to vary much by location or by volume. Faced with identical marginal costs and demands that differ only in "size" (i.e., λ), two monopolists will charge identical prices even though one may be much less profitable than the other and possibly even unprofitable. The monopoly price generates the highest level of profit, whether or not that profit is sufficient to cover costs.[20]

2. LOCAL COIN RATES ACROSS LOCATIONS

While a somewhat uniform rate across locations is consistent with monopoly behavior, some parties claim that the prevalence of a $0.35 drop rate is evidence that there is price competition among payphone sites because the model of perfect

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[19] The MCI Cost Study provides detailed information on the cost of the various components of a payphone.

[20] It is standard fare in undergraduate principles classes that not all monopolies are profitable.See, e.g., the principles of economics text *Economics* (1994) by R. B. Ekelund and R. D. Tollison, at page 251.

competition predicts a uniform rate.[21] This assertion presumes, however, that a) there exist a centralized market for local coin calls consisting of many customers and many payphones; b) payphones are not differentiated in any way; c) all face identical perfectly elastic demand curves; d) consumers and firms have perfect information; e) every payphone faces an identical number of competitors; and e) prices are not regulated and there are no residual effects of previous price regulation. None of these characteristics accurately describes the payphone industry.

But why do we observe the $0.35 phenomenon? Most likely because a somewhat uniform rate would be expected with monopoly behavior at payphone sites. Rate variations can be explained, in the monopoly model, by variations in marginal cost across sites and differences in the mix of consumers. Other reasons, such as the residual effects of regulation, the potential for re-regulation, ongoing regulatory proceedings, or a lack of PSP information on the nature of demand at specific locations also might apply.

A sample of local coin rates for a number of states is provided in Attachment A. While this sample is not scientific, it provides some information on the prices of local coin calls across the country. First, while there is some variation in the drop rate, it does appear that $0.35 is the most common drop rate across states (exclusive of the New York sample). However, for about 15 percent of the "Other States" sample, the local coin drop rate is less than $0.35. Certainly, some questioning of the Commission's assertion that $0.35 is equal to the cost of a coin call is warranted when many payphones are operating at a coin rate of less than $0.35. Furthermore, which of the twenty local coin call pricing schemes observed in this sample ensures that price is equal to cost?

Second, an obvious trend in pricing is the use of incremental pricing. According to this sample, the Commission's use of $0.35 as the local coin rate implicitly assumes all local coin calls are about three minutes or, in some cases, even less. For example, the price of a local coin call in Rhode Island would be $0.60 if the average call length was 3 minutes. If five minutes, the price of a local coin call would be about $0.40 in New York and the other states, but a whopping $0.87 in Rhode Island. One unanswered question is what price will the Commission's avoided cost approach use? Is the drop rate the relevant price, or the metered rate? Will dial-around calls be subject to the incremental charges as well? These questions must be answered to implement the avoided cost approach. Sprint has already filed a

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[21] No party has directly asserted that the payphone industry is perfectly competitive, perhaps because of the obvious absurdity of the claim.

complaint against some payphone operators, charging per-minute rates for local calls, for terminating dial-around and 800 calls at the sixty second mark.[22]

In addition, the Commission's proposed cost surrogacy approach implies that if local coin rates rise above current levels, the coinless compensation rate will rise as well. If the current local coin rate is equal to the cost of a coin call, then how can an increased coin rate also be equal to the cost of a local coin call? Absent an increase in cost, and there is little reason to believe cost will increase in the future, both rates cannot equal cost. Further, the compensation rate will rise whether or not the local coin rate increase is based on cost or market power. The commission's approach is unable to distinguish between the two. One rate or the other is a poor surrogate for the cost of local coin call, and the Commission probably will be required at some point to explain which one is the correct surrogate.

3. RENT AND OPPORTUNITY COSTS

The payphone industry attempts to explain away excessive locational rents, in part, by arguing that the space occupied by a payphone has an opportunity cost, and the locational rent simply represents that opportunity cost. Considering the rather limited space requirements for a payphone and the potential alternative uses for that type of space, however, the opportunity cost of the space used by a payphone is unlikely to equal $50 or more on average, especially when the next best use is about $13 per month on average (the average monthly rent for 10 square feet of retail space according to the *Nat'l Real Estate Review, Market Conditions Report*, 1997-1998). Often, the space used for a payphone is simply a byproduct of building design, e.g., an empty hall, a foyer, bathroom wall, etc. As for vending machines, there are few places where a premise owner has to make a decision between a payphone and a candy machine - rarely is space that limited. Further, vending machines and payphones are probably more complementary than substitutable.[23]

What is especially puzzling about this line of reasoning is that is was used to explain the recent widespread increase in local coin rates from $0.25 to $0.35. But the fact a payphone was located in a particular place prior to deregulation reveals that the payphone was already the highest valued use of the space. Unless other uses of the space suddenly become more valuable, coincidentally at the same time

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[22] File No. NSD-L-98-118.

[23] A payphone user might purchase a soft drink or crackers.

payphones were deregulated, there would be no reason for the price of local coin calls to increase in order to pay higher commissions to premise owners.[24]

4. RICARDIAN RENTS

Another attempted explanation for the wide variances in commission payments is that the rents are simply payments to more productive assets. This explanation is similar to the economic concept of Ricardian land rents. [25] In Ricardo's model of rent, the rent for an acre of farmland is determined by its relative productivity to the least productive acre in use (the marginal acre). For example, the best acre in production may produce one hundred bushels of wheat while the least productive only fifty bushels. If all wheat is sold in a world market at the perfectly competitive price (all bushels are perfect substitutes, regardless of the acre on which it is grown), then the value of the fifty extra bushels on the more productive acre justifies a higher rent for that acre. Locational rents, therefore, are simply payments to the landlord for having a more productive location for payphone calls.

The argument does not survive even minimal scrutiny in this context, for a number of reasons. First, there is no central market clearing process for payphones as in Ricardo's model. At best, only a few payphones could be in direct competition due to spatial differentiation, incomplete information, and search costs. Second, in Ricardo's model, an additional acre of land coming into cultivation right next to the more productive acre would not affect the level of rent for the previously cultivated land. No single acre's produce can affect the market price. Alternatively, if a payphone is located right next to an existing payphone, the rent will fall substantially. While the payphone industry's economic advocates might ignore this fact, the payphone operators do not: "A payphone location may be perfect in every other respect, but if the payphone is going to be too close to a competing payphone, then it could be a losing proposition (Bob Lane, Phone+, August 1998)." Being physically "too close" to another firm in a "competitive market" has little meaning, but plenty of meaning in a less than competitive, spatially differentiated market.

Third, explaining locational rents by variations in the quantity of calls at one location relative to another (all sold at a perfectly competitive price) is puzzling

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[24] The rationale for Bell Atlantic's increase of payphone coin rates from $0.25 to $0.35 in November 1997 was that it "must pay competitive commissions for property owners to place its pay phones in their businesses so it must charge a competitive price to users of those phones ("Bell Atlantic Ups Pay Phone Rates in 9 Areas," Reuters, November 12, 1997). See also Communications Daily, May 11, 1998: "GTE joined other LECs in boosting payphone rates in Cal. to 35 cents on 40,000 phones in state. Bell Atlantic and SBC also have raised rates, now that FCC has deregulated payphone business to permit market-based rates (Warren's Telecom Regulation Monitor, November 24, 1997). "

[25] David Ricardo (1772-1823) was an early and substantial contributor to economic thought.

within the context of a competitive payphone market. Say there are two payphones competing with one another (they are in a single 5¢ circle). Assume that because one phone is located in a slightly more convenient spot (e.g., closer to the entrance) one payphone gets 90 percent of the calls and the other 10 percent. Both phones charge $0.35 for a local coin call. The payphone with most of the business must pay a large commission payment, while the low volume phone pays only a little if any locational rent. If the two payphones are in the same market and payphones compete in price, then why wouldn't the low traffic payphone reduce its price to $0.30? The trade-off for the low volume phone is 10 percent of the business at $0.35 and 100 percent of the business at $0.30. Clearly, reducing price would be the sensible decision. However, we do not observe this type of behavior in the payphone industry. Thus, the fact that two payphones charge the same price but earn different locational rents due to traffic differences cannot be explained by the theory of Ricardian rents.

5. LAND MARKETS ARE COMPETITIVE

Some parties claim that locational rents are not evidence of monopoly profits because locations do not have market power. However, it is the small geographic market of the payphone that produces the rent, not the larger geographic market associated with properties. Choosing a building in which to locate a store is a much different decision than making a local coin call; there is much greater substitutability for a store looking to rent space than there is for a customer looking for a payphone. Statements that numerous products and services have a spatial nature, e.g., hotels and grocery stores, but are not considered monopolistic, are equally disingenuous.[26] The savings on a hotel or grocery bill might justify a transportation/search cost of $1, but a $0.05 savings on a payphone call would not. Also, not every price charged by a hotel or grocery store is equal to cost, even if they operate in competitive markets. So, it would not make sense to base a regulated rate on the market price of individual items (e.g., the price of a cola in a hotel mini-bar) sold by these businesses.

IV. The New York - Rhode Island Experience

Bell Atlantic, the dominant provider of payphone service in New York and Rhode Island, has agreed with the state utility commissions not to charge over $0.25

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[26] Spatial market power, however, often does manifest itself in retail gas outlets as well as other spatially differentiated products and services. I have associates who will not stop at an exit for gas unless at least two stations are located at the exit. I do not mean to imply gas stations should be regulated. The point is that price will not equal cost in situations where spatial differentiation is important and entry cannot eliminate that differentiation.

for a local coin call. It has been suggested that the rates charged by private payphone service providers (not bound by Bell Atlantic's agreement) in those states might provide some evidence regarding competition in the payphone industry. The empirical hypothesis is illusively straightforward: in a competitive market, private payphone operators would not be able to raise their prices above Bell Atlantic's $0.25 since consumers will use the lower priced Bell Atlantic payphones. As Attachment A shows, PSP rates for local coin calls in Rhode Island are substantially above the $0.25 rate charged at Bell Atlantic payphones regardless of call length. In New York, alternatively, the PSP drop rates are more in line with the Bell Atlantic rates. However, 65 percent of the private payphones in the New York sample use incremental pricing, indicating that for longer calls the PSP rates are above those of Bell Atlantic. For example, if the average length of a payphone call is five minutes, the PSP rates exceed those of Bell Atlantic by 56 percent.[27] Thus, within the context of the simple empirical test of competition, the evidence is mixed.

The mixed result reveals some problems with the seemingly simple empirical hypothesis. First, accepting the hypothesis, the data would conclude that there is competition in New York but none in Rhode Island. If true, some explanation of the difference in competitive conditions must be given. Furthermore, if New York is "more competitive" than Rhode Island, then $0.25 might be the more appropriate cost surrogate for the avoided cost method, not the $0.35 rate in the "non-competitive" Rhode Island payphone market. Indeed, if this empirical test proves anything it is that $0.35 is not a competitive rate (since, according to the theory, there is no competition in Rhode Island).

Secondly, there is no evidence that $0.25 isn't the monopoly price in New York. Local coin rates in South Dakota, for example, are $0.25 despite deregulation of rates in that state in 1992. Without knowledge of what the competitive price and monopoly price are, little can be said about the observed price distribution in either New York or Rhode Island. One explanation of the New York experience may be that $0.25 is an ineffective price ceiling on local coin calls, i.e., the monopoly price is equal to or less than $0.25. While $0.25 may be considered a "low price" and a "regulated price," that does not imply that it's not the monopoly price.

Third, this empirical test holds that there is a centralized market clearing process for payphone calls and Bell Atlantic is but one firm in that market. Aside from the obvious fact there is no centralized market clearing process for payphone calls, Bell Atlantic operates the vast majority of payphones in New York. Certainly, the Herfindahl Index in the "New York payphone market" would lead one to question the degree of competition in that "market." Or, perhaps the Dominant Firm -

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[27] Since change will not be given for the incremental minutes, an incremental pricing structure could have an even more dramatic effect on the typical cost of a local coin call.

Competitive Fringe model might better describe industry structure in New York. In that model, price does not equal cost for the dominant firm. Clearly, even if the incorrect assumption of a centralized market for payphone calls is made, it does not immediately follow that competition is vigorous enough to drive price to cost.

Finally, for this empirical hypothesis to have merit, it must be explained why the payphone market is bounded by state borders. If spatially differentiated payphones are the exception and not the rule, then payphones in Rhode Island, Wisconsin, and the other states will compete with payphones in New York. Should not the $0.20 local coin rate payphones in the "Other States" sample constrain the rates of all the other payphones in the country, or least those in the same state? The nature of competition implicit in this empirical test, and implicit in the Commission's surrogacy approach as a whole, cannot be reconciled with the realities of the payphone market. However, the empirical facts *are entirely consistent* with spatial monopoly and local coin rates that are in excess of cost.

V. Excessive Compensation and Consumer Welfare

The Commission repeatedly asserted in the *First* and *Second Orders* that per-call compensation must lead to an increased number of payphones. Increasing the per-call compensation rate will increase a payphone's revenues as long as the elasticity of demand for dial-around calls is less than unity and higher revenues will likely increase the number of payphone sites. The Commission cannot ignore, however, the Act's requirement that its actions be "to the benefit of the general public (§276)." Simple logic reveals that increasing the per-call compensation rate in an attempt to increase the number of payphones is an exceptionally inefficient plan to increase the number of payphones and its negative effects on consumer welfare are substantial.

The problem of creating new payphone sites by driving up the coinless compensation rate is that the compensation rate is paid per call. Payphone sites that do not exist today are sites that probably would have too few calls to be profitable at current rates. Existing sites, by definition, are profitable. Thus, a high per call compensation rate has little effect on the revenues at marginal locations where call quantities are low, but a substantial effect on the revenues (and profits) at existing locations where call quantities are high. The result is few new payphones and an enormous windfall to existing payphones. E Group estimates that the annual cost to consumers of a dime increase in the local coin rate is $5,500 per new payphone, including an offset for the positive consumer benefit associated with the new payphone locations. Huge subsidies for premise owners and large losses in consumer welfare for a trivial number of new phones is hardly "to the benefit of the general public."

VI. Conclusion

If the Commission chooses not to abandon its cost surrogate approach, it will be faced with the near impossible task of arguing convincingly that the payphone industry is characterized by aggressive *price competition*. An economic analysis of the structure of the payphone industry reveals glaring inconsistencies with those conditions typically associated with price competition - the type of competition that will (in at least some theories) drive the local coin rate to economic cost. The combination of a low absolute price, spatial differentiation, high fixed-sunk costs, locational entry barriers, and a glaring lack of information on behalf of consumers all work in tandem to reduce price competition substantially in the payphone industry. Vigorous price competition is simply inconsistent with the structural characteristics of the payphone market and the observed behavior of payphone operators. Monopoly behavior, alternatively, is.

Finally, the Commission should not continue to ignore the fact that dial-around service from a payphone is nothing more than interconnection, and it is the Commission's policy to price interconnection services at cost. Absent an interconnection/unbundling regime, the ILECs control over the local loop confers to it a monopoly over local service. Absent the TOCSIA rules, the PSP would have a monopoly over all calls originated at its payphones. Neither has an incentive to allow consumers access to competitors, and if forced to provide that access, both desire to have the interconnection price set substantially above cost. In the same way interconnection-unbundling requirements are necessary to promote competition in the local exchange market, requiring PSPs to give consumers access to alternative interexchange carriers is necessary to promote and protect competition in the payphone originated long distance market. As discussed above, cost-based interconnection at payphones can also promote competition in the local call market by making dial-around local calls potential substitutes for local coin calls if local coin rates continue to rise. The Commission has repeatedly asserted that cost-based interconnection rates are necessary for competition to develop and flourish. There is no economic reason for the Commission to treat the price of interconnection at payphones differently than in other telecommunications markets.

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MCI WorldCom, Inc.

Attachment A. Sample of Local Coin Rates

Other States

Length of call in Minutes	1	3	5	7	N	Distribution
$0.20	$0.20	$0.20	$0.20	$0.20	3	1%
$0.20 for 15 minutes	$0.20	$0.20	$0.20	$0.20	7	1%
$0.25	$0.25	$0.25	$0.25	$0.25	42	8%
$0.25 for 4 minutes	$0.25	$0.25	$0.50	$0.50	5	1%
$0.25 for 5 minutes	$0.25	$0.25	$0.25	$0.50	8	1%
$0.25 for 15 minutes	$0.25	$0.25	$0.25	$0.25	17	3%
$0.25 for 10 minutes, $0.10 min	$0.25	$0.25	$0.25	$0.25	1	0%
0.25 per minute	$0.25	$0.75	$1.25	$1.75	5	1%
$.30 for 15 minutes	$0.30	$0.30	$0.30	$0.30	1	0%
$0.35	$0.35	$0.35	$0.35	$0.35	230	43%
$0.35 for 3 minutes	$0.35	$0.35	$0.70	$1.05	1	0%
$0.35 for 4 minutes	$0.35	$0.35	$0.70	$0.70	20	4%
$0.35 for 5 minutes	$0.35	$0.35	$0.35	$0.70	5	1%
$0.35 for 10 minutes	$0.35	$0.35	$0.35	$0.35	1	0%
$0.35 for 15 minutes	$0.35	$0.35	$0.35	$0.35	119	22%
$0.35 for 5 minutes, $0.35 min	$0.35	$0.35	$0.35	$1.05	1	0%
$0.35 for 4 minutes, $0.25 min	$0.35	$0.35	$0.60	$1.10	1	0%
$1 for 3 minutes	$1.00	$1.00	$2.00	$3.00	12	2%
No Info	na	na	na	na	58	11%
MEAN	$0.35	$0.35	$0.40	$0.44	537	100%

Rhode Island

Length of call in Minutes	1	3	5	7	N	Distribution
$0.25	$0.25	$0.25	$0.25	$0.25	25	34%
$0.25/min (minimum $0.50)	$0.50	$1.00	$1.50	$2.00	22	30%
$0.35	$0.35	$0.35	$0.35	$0.35	9	12%
$0.25/min	$0.25	$0.75	$1.25	$1.75	16	22%
No Info	na	na	na	na	2	3%
Mean	$0.34	$0.60	$0.87	$1.13	74	100%

New York

Length of call in Minutes	1	3	5	7	N	Distribution
$0.20	$0.20	$0.20	$0.20	$0.20	1	1%
$0.25	$0.25	$0.25	$0.25	$0.25	28	34%
$0.25 for 5 minutes	$0.25	$0.25	$0.25	$0.50	2	2%
$0.25 for 4 minutes	$0.25	$0.25	$0.50	$0.50	1	1%
$0.25 for 3 minutes	$0.25	$0.25	$0.50	$0.75	40	49%
No Info	na	na	na	na	11	13%
Mean	$0.25	$0.25	$0.39	$0.54	82	100%